

What is claimed is:

1. An electromagnetic induced accelerator, comprising:

internal and external circular loop inductors for inducing a magnetic field when a current is applied to the internal and external circular loop inductors in a same direction, the internal and external circular loop inductors being spaced apart from each other by a predetermined distance and disposed coaxially and parallel to each other;

a channel, which includes dielectric layers contacting the internal and external circular loop inductors, disposed between the internal and external circular loop inductors, wherein a secondary current is induced in the channel between the dielectric layers by the induced, magnetic field; and

a discharging coil for supplying a pulse energy to the channel and for generating a plasma.

2. The accelerator as claimed in claim 1, wherein the induced, magnetic field is reduced in an axial direction.

3. The accelerator as claimed in claim 2, wherein the induced, magnetic field is reduced in an axial direction by reducing a number of windings of coils wound in the internal and external circular loop inductors in the axial direction.

4. The accelerator as claimed in claim 2, wherein the induced, magnetic field is reduced in an axial direction by reducing the current applied to the internal and external circular loop inductors.

5. The accelerator as claimed in claim 1, wherein the induced, magnetic field is formed orthogonal to the axial direction and across the channel.

6. The accelerator as claimed in claim 1, wherein the secondary current is formed in a direction to surround the internal circular loop inductor.

7. The accelerator as claimed in claim 1, wherein a speed of plasma ions is about 500 eV or less.

8. The accelerator as claimed in claim 1, further comprising:

a device for measuring a speed of plasma ions, the device being

selected from the group consisting of a magnetic fluctuation probe, a

Langmuir probe, and a speed indicator.